CLAIMS

What is claimed:

1. In a digital communication system employing a transmission medium shared among multiple users, a transmitter system comprising:

a first encoder that encodes data related to coordinating access to said transmission medium according to a first encoding scheme;

a second encoder that encodes data not related to coordinating access to said transmission medium according to a second encoding scheme; and

a control system that allocates transmission time between output of said first encoder and said second encoder; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

2. The transmitter system of claim 1 wherein said first encoding scheme and said second encoding scheme comprise convolutional encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

3. The transmitter system of claim 1 wherein said first encoding scheme and said second encoding scheme comprise trellis encoding schemes and first encoding scheme has a lower rate than said second encoding scheme.

4. The transmitter system of claim 1 wherein said first encoding scheme and said second encoding scheme comprise block encoding schemes.

5. The transmitter system of claim 4 wherein said block encoding schemes comprise Reed-Solomon encoding schemes.

6. In a digital communication system employing a transmission medium shared among multiple users, a transmitter system comprising:

a first mapper that outputs complex symbol values falling on a first symbol constellation responsive to data relating to coordinating access to said transmission medium;

a second mapper that outputs complex symbol values falling on a second symbol constellation responsive to data not relating to coordinating access to said transmission medium; and

a control system that allocates transmission time between output of said first mapper and output of said second mapper; and

wherein complex symbol values of said first symbol constellation are spaced more widely than complex symbol values of said second symbol constellation.

7. In a digital communication system employing a transmission medium shared among multiple users, a receiver system comprising:

a first decoder that decodes data related to coordinating access to said transmission medium according to a first encoding scheme;

a second decoder that decodes data not related to coordinating access to said transmission medium according to a second encoding scheme; and

a control system that selects output of either said first decoder or said second decoder for reception; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

8. The receiver system of claim 7 wherein said first encoding scheme and said second encoding scheme comprise convolutional encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

Sub A9 The reciever system of claim 7 wherein said first encoding scheme and said second encoding scheme comprise trellis encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

10. The receiver system of claim 7 wherein said first encoding scheme and said second encoding scheme comprise block encoding schemes.

11. The receiver system of claim 7 wherein said block encoding schemes comprise Reed-Solomon encoding schemes.

Sub A10 In a digital communication system employing a transmission medium shared among multiple users, a method for transmitting comprising:

encoding data related to coordinating access to said transmission medium according to a first encoding scheme;

encoding data not related to coordinating access to said transmission medium a second encoding scheme; and

transmitting responsive to output by either said first encoder or said second encoder; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

13. The method of claim 12 wherein said first encoding scheme and said second encoding scheme comprise convolutional encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

14. The method of claim 12 wherein said first encoding scheme and said second encoding scheme comprise trellis encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

15. The method of claim 12 wherein said first encoding scheme and said second encoding scheme comprise block encoding schemes.

16. The method of claim 15 wherein said block encoding schemes comprise Reed-Solomon encoding schemes.

17. In a digital communication system employing a common transmission medium, a method for controlling transmission comprising:

transforming data into a modulation signal, said data comprising data relating to controlling access to said common transmission medium and data not relating to controlling access to said common transmission medium; and

converting said modulation signal to an RF signal for transmission; and

wherein said transforming step applies greater protection against channel impairments to said data relating to controlling access to said common transmission medium.

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